6HR6

Semiremote-Cutoff Pentode

7-PIN MINIATURE TYPE

For Intermediate-Frequency-Amplifier Applications in FM, AM, and AM/FM Receivers

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater Characteristics and Ratings *(Design-Maximum Values)*:

Voltage (AC or DC)	6.3[a]	6.3 ± 0.6	volts
Current	0.450 ± 0.030	0.450[b]	amp
Warm-up time (Average)	11	–	sec
Peak heater-cathode voltage:			
Heater negative with respect to cathode	200 max.		volts
Heater positive with respect to cathode	200[c] max.		volts

Direct Interelectrode Capacitances:[d]

Grid No.1 to plate	0.006 max.	μμf
Grid No.1 to cathode, grid No.3 & internal shield, grid No.2, and heater	8.8	μμf
Plate to cathode, grid No.3 & internal shield, grid No.2, and heater	5.2	μμf

Characteristics, Class A1 Amplifier:

Plate Supply Voltage	200	volts
Grid No.3	*Connected to cathode at socket*	
Grid-No.2 Supply Voltage	115	volts
Grid-No.1 Supply Voltage	0	volts
Cathode Resistor	68	ohms
Plate Resistance (Approx.)	0.5	megohm
Transconductance	8500	μmhos
Plate Current	13.2	ma
Grid-No.2 Current	4.3	ma
Grid-No.1 Voltage (Approx.) for transconductance (μmhos) = 60	–15	volts

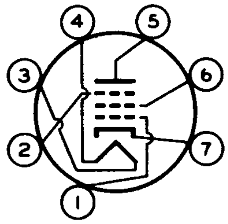
Mechanical:

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	2-1/8"
Maximum Seated Length	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip)	1-1/2" ± 3/32"
Diameter	0.650" to 0.750"
Dimensional Outline	See *General Section*
Bulb	T5-1/2
Base	Small-Button Miniature 7-Pin (JEDEC No.E7-1)

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Basing Designation for BOTTOM VIEW. 7BK

Pin 1 - Grid No.1
Pin 2 - Grid No.3, Internal Shield
Pin 3 - Heater



Pin 4 - Heater
Pin 5 - Plate
Pin 6 - Grid No.2
Pin 7 - Cathode

AMPLIFIER — Class A₁

Maximum Ratings, *Design-Maximum Values:*

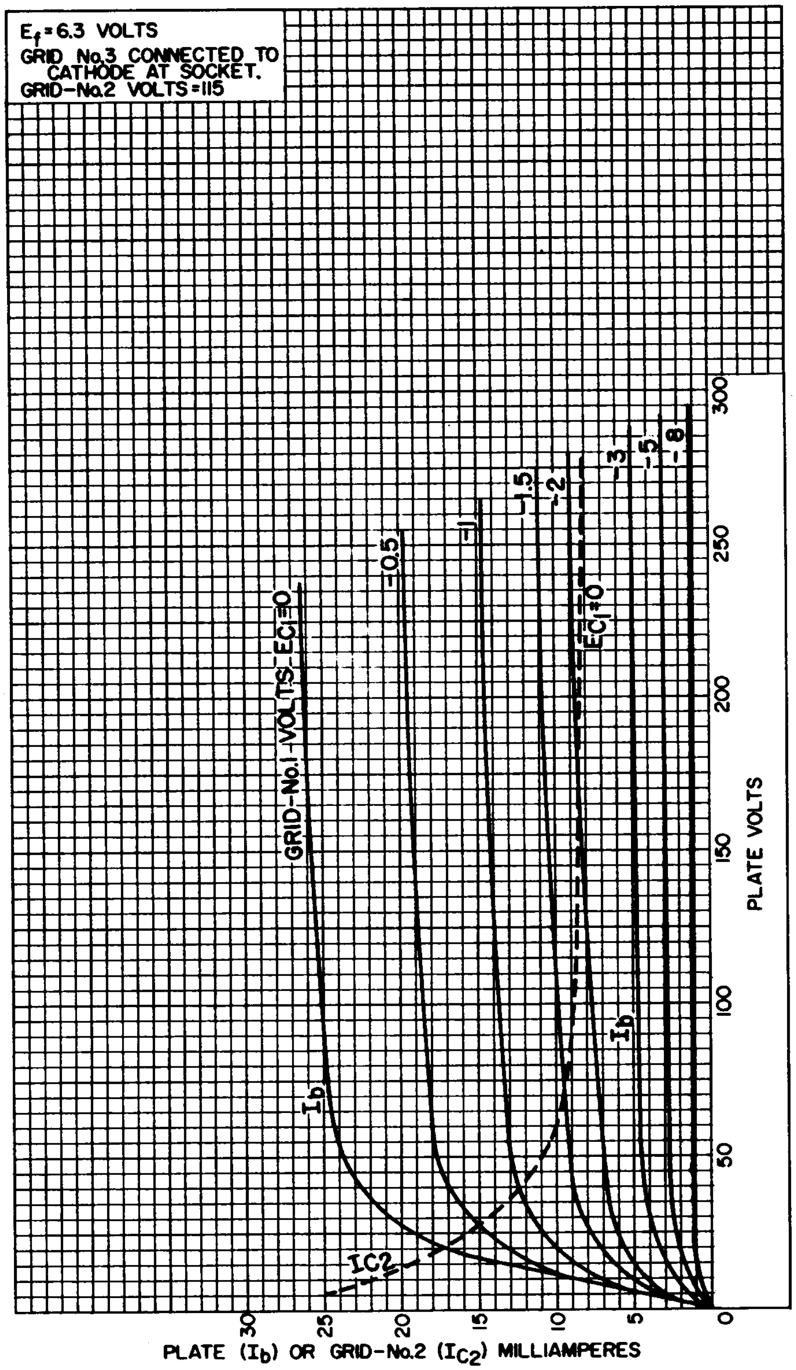
PLATE VOLTAGE	300 max.	volts
GRID No.3 (SUPPRESSOR GRID) . . .	*Connect to cathode at socket*	
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE. . .	300 max.	volts
GRID-No.2 VOLTAGE	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Negative-bias value	50 max.	volts
Positive-bias value	0 max.	volts
GRID-No.2 INPUT:		
For grid-No.2 voltages up to 150 volts	1 max.	watt
For grid-No.2 voltages between 150 and 300 volts	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	
PLATE DISSIPATION	3 max.	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For fixed-bias operation.	0.5 max.	megohm
For cathode-bias operation.	1 max.	megohm

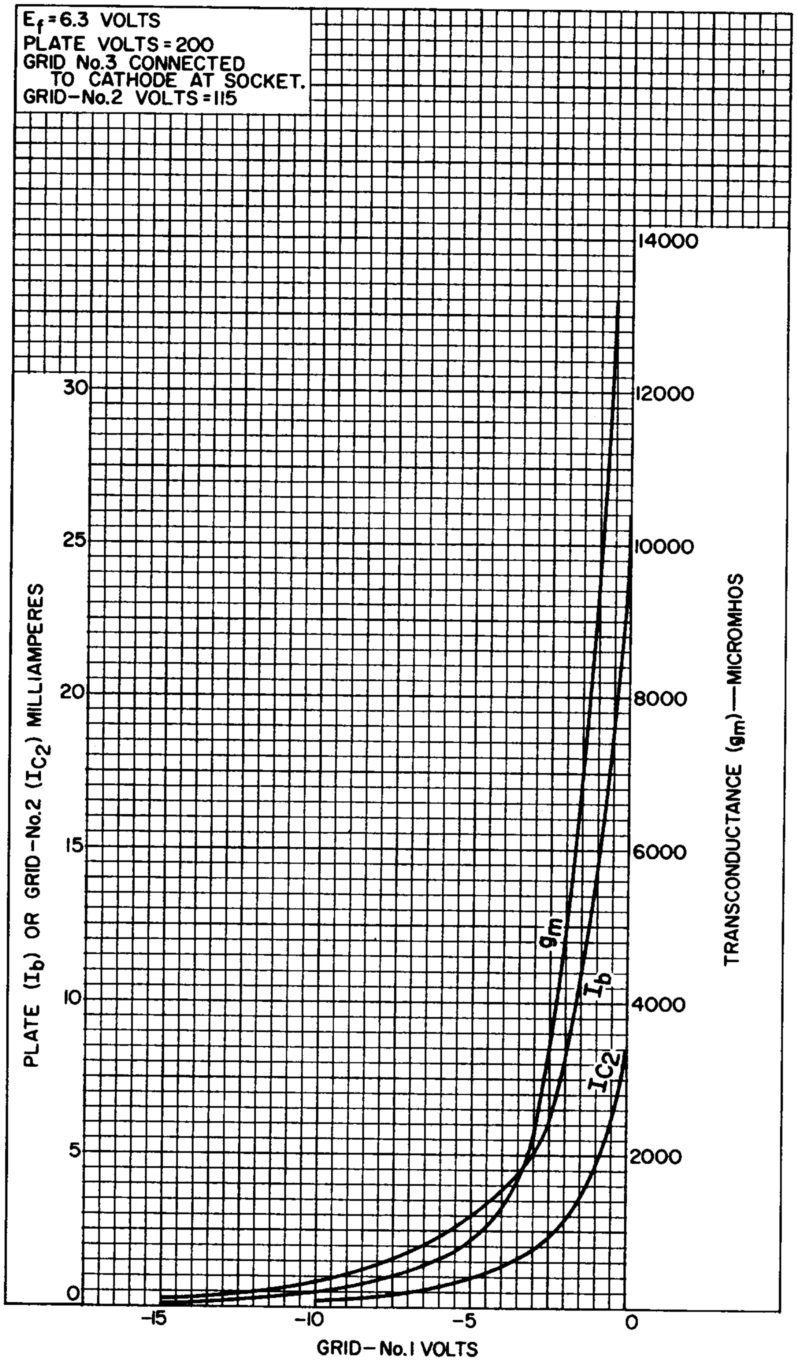
[a] At heater amperes = 0.450.
[b] At heater volts = 6.3.
[c] The dc component must not exceed 100 volts.
[d] Without external shield.

AVERAGE CHARACTERISTICS



92CM-11530

AVERAGE CHARACTERISTICS



92CM-11533